What is claimed is:

1. A nucleic acid ligand to tenascin-C identified according to the method comprising:

a) contacting a candidate mixture of nucleic acids with tenascin-C, wherein nucleic acids having an increased affinity to tenascin-C relative to the candidate mixture may be partitioned from the remainder of the candidate mixture;

b) partitioning the increased affinity nucleic acids from the remainder of the candidate mixture;

c) amplifying the increased affinity nucleic acids to yield a mixture of nucleic acids enriched for nucleic acids with relatively higher affinity and specificity for binding to tenascin-C, whereby a nucleic acid ligand of tenascin-C may be identified.

2. The nucleic acid ligand of claim 1 wherein said candidate mixture of nucleic acids is comprised of single stranded nucleic acids.

3. The nucleic acid ligand of claim 2 wherein said single stranded nucleic acids are ribonucleic acids.

4. The nucleic acid ligand of claim 3 wherein said candidate mixture of nucleic acids comprises 2'-F (2'-fluoro) modified ribonucleic acids.

5. A purified and isolated non-naturally occurring nucleic acid ligand to tenascin-C.

6. The purified and isolated non-naturally occurring nucleic acid ligand of claim 5 wherein said nucleic acid ligand is single stranded.

7. The purified and isolated non-naturally occurring nucleic acid ligand of claim 6 wherein said nucleic acid ligand is RNA.

8. The purified and isolated non-naturally occurring RNA ligand of claim 7 wherein said ligand is comprised of 2'-fluoro (2'-F) modified nucleotides.

9. The purified and non-naturally occurring RNA ligand of claim 8 wherein said ligand is selected from the group consisting of the sequences as set forth in Tables 3 and 4 and Figure 2.

10. A method of identifying nucleic acid ligands to tenascin-C. the method comprising:

a) contacting a candidate mixture of nucleic acids with tenascin-C, wherein nucleic acids having an increased affinity to tenascin-C relative to the candidate mixture may be partitioned from the remainder of the candidate mixture;

b) partitioning the increased affinity nucleic acids from the remainder of the candidate mixture;

c) amplifying the increased affinity nucleic acids to yield a mixture of nucleic acids enriched for nucleic acids with relatively higher affinity and specificity for binding to tenascin-C, whereby a nucleic acid ligand of tenascin-C may be identified.

11. The method of claim 10 further comprising:

d) repeating steps a), b), and c).

12. The method of claim 10 wherein said candidate mixture of nucleic acids is comprised of single stranded nucleic acids.

13. The method of claim 12 wherein said single stranded nucleic acids are ribonucleic acids.

14. The method of claim 13 wherein said nucleic acids are 2'-F (2'- fluoro) modified ribonucleic acids.

15. A complex for use in *in vivo* diagnostics comprising a tenascin-C nucleic acid ligand and a marker.

16. The complex of claim 15 wherein said tenascin-C nucleic acid ligand is identified by the method comprising:

a) contacting a candidate mixture of nucleic acids with tenascin-C, wherein nucleic acids having an increased affinity to tenascin-C relative to the candidate mixture may be partitioned from the remainder of the candidate mixture;

b) partitioning the increased affinity nucleic acids from the remainder of the candidate mixture;

c) amplifying the increased affinity nucleic acids to yield a mixture of nucleic acids enriched for nucleic acids with relatively higher affinity and specificity for binding to tenascin-C, whereby a nucleic acid ligand of tenascin-C may be identified.

17. The complex of claim 16 wherein said candidate mixture of nucleic acids is comprised of single stranded nucleic acids.

18. The complex of claim 17 wherein said single stranded nucleic acids are ribonucleic acids.

19. The complex of claim 18 wherein said candidate mixture of nucleic acids comprises 2'-F (2'-fluoro) modified ribonucleic acids.

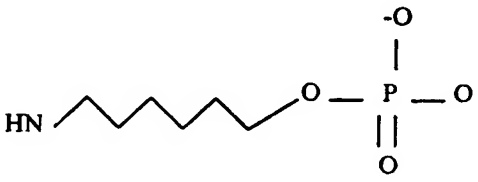
20. The complex of claim 15 wherein said marker is selected from the group consisting of radionuclides, fluorophores, magnetic compounds, and biotin.

21. The complex of claim 20 wherein said radionuclide is selected from the group consisting of technetium-99m (Tc-99m), Re-188, Cu-64, Cu-67, F-18, ^{125}I, ^{131}I, ^{111}In, ^{32}P, and ^{186}Re.

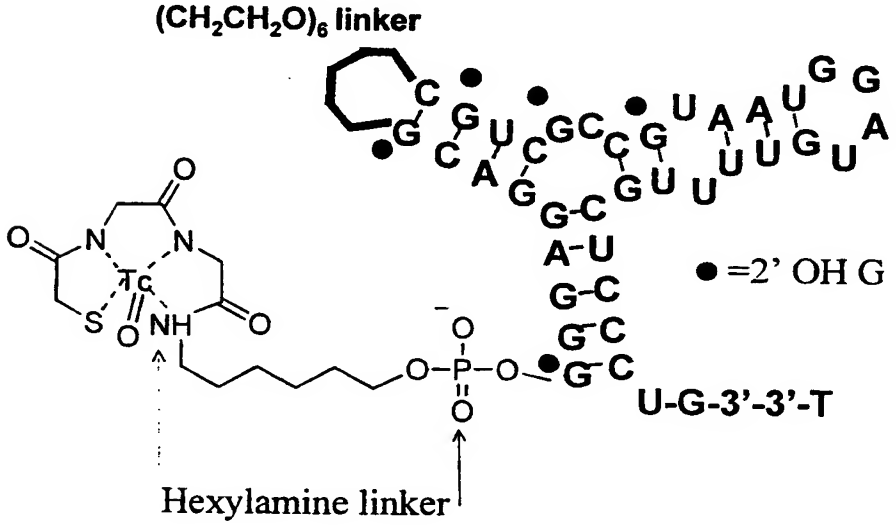
22. The complex of claim 21 wherein said marker is technetium-99m.

23. The complex of claim 22 further comprising a linker.

24. The complex of claim 23, wherein said linker has the structure



25. The complex of claim 24, wherein said complex is



All A's = 2'-OMe
All Gs, except as indicated, are 2'-OMe modified
All Cs are 2'-F modified
All Us are 2'-F modified

26. A method for the preparation of a complex comprised of a tenascin-C nucleic acid ligand and a marker, said method comprising:

a) contacting a candidate mixture of nucleic acids with tenascin-C, wherein nucleic acids having an increased affinity to tenascin-C relative to the candidate mixture may be partitioned from the remainder of the candidate mixture;

b) partitioning the increased affinity nucleic acids from the remainder of the candidate mixture;

c) amplifying the increased affinity nucleic acids to yield a mixture of nucleic acids enriched for nucleic acids with relatively higher affinity and specificity for binding to tenascin-C; and

d) covalently linking said identified tenascin-C nucleic acid ligand with a marker.

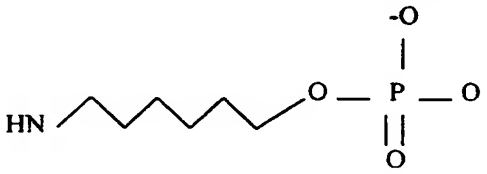
27. The method of claim 26 wherein said marker is selected from the group consisting of radionuclides, fluorophores, magnetic compounds, and biotin.

28. The method of claim 27 wherein said radionuclide is selected from the group consisting of Tc-99m, Re-188, Cu-64, Cu-67, F-18, ^{125}I, ^{131}I, ^{111}In, ^{32}P, and ^{186}Re.

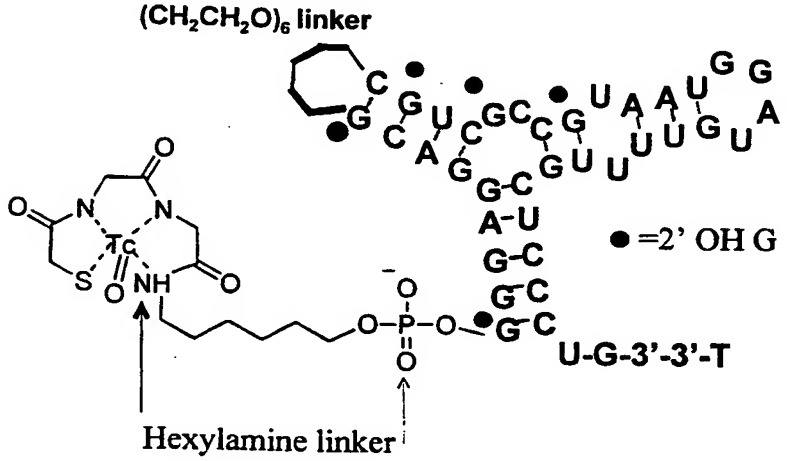
29. The method of claim 28 wherein said marker is Tc-99m.

30. The method of claim 29 further comprising a linker.

31. The complex of claim 30, wherein said linker has the structure



32. The complex of claim 31, wherein said complex is



All A's = 2'-OMe
All Gs, except as indicated, are 2'-OMe modified
All Cs are 2'-F modified
All Us are 2'-F modified

33. A method for detecting the presence of a disease that is expressing tenascin-C in a biological tissue which may contain said disease comprising;

a) identifying a nucleic acid ligand from a candidate mixture of nucleic acids, said nucleic acid ligand being a ligand of tenascin-C, by the method comprising

i) contacting a candidate mixture of nucleic acids with tenascin-C, wherein nucleic acids having an increased affinity to tenascin-C relative to the candidate mixture may be partitioned from the remainder of the candidate mixture;

ii) partitioning the increased affinity nucleic acids from the remainder of the candidate mixture;

iii) amplifying the increased affinity nucleic acids to yield a mixture of nucleic acids with relatively higher affinity and specificity for binding to tenascin-C, whereby a nucleic acid ligand of tenascin-C is identified;

b) attaching a marker that can be used in *in vivo* diagnostics to said nucleic acid ligand identified in step iii) to form a marker-nucleic acid ligand complex;

c) exposing a tissue which may contain said tumor to said marker-nucleic acid ligand complex; and

d) detecting the presence of said marker-nucleic acid ligand in said tissue, whereby a disease expressing tenascin-C is identified.

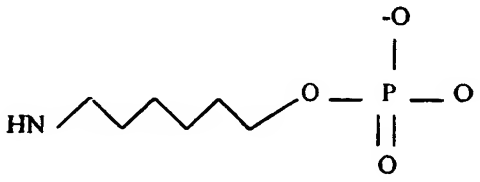
34. The method of claim 33 wherein said marker-nucleic acid ligand further comprises a linker.

35. The method of claim 34 wherein said marker is selected from the group consisting of radionuclides, fluorophores, magnetic compounds, and biotin.

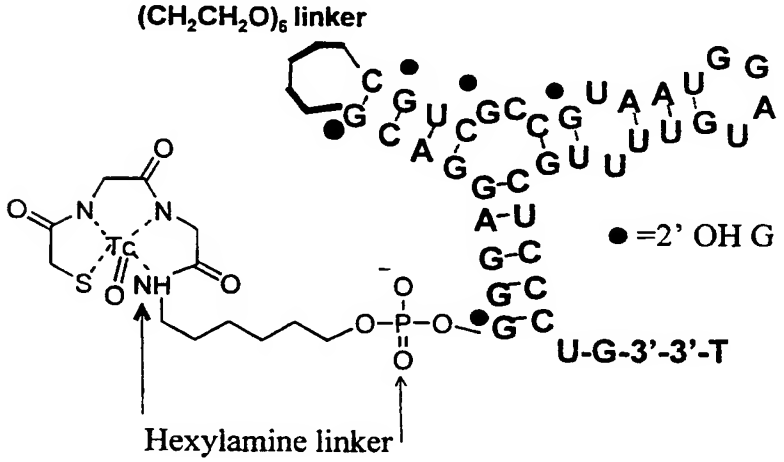
36. The method of claim 35 wherein said radionuclide is selected from the group consisting of Tc-99m, Re-188, Cu64, Cu67, F-18, ^{125}I, ^{131}I, ^{111}In, ^{32}P, and ^{186}Re.

37. The method of claim 36 wherein said marker is technetium-99m.

38. The method of claim 37 wherein said linker



39. The method of claim 38 wherein said marker-nucleic acid ligand is



All A's = 2'-OMe
All Gs, except as indicated, are 2'-OMe modified
All Cs are 2'-F modified
All Us are 2'-F modified

40. The method of claim 33 further comprising attaching a therapeutic or diagnostic agent to said complex.

41. The method of claim 33 wherein said disease is selected from the group consisting of cancer, psoriasis, and atherosclerosis.

42. The method of claim 41 wherein said disease is cancer.

43. A method for delivering a therapeutic agent to a disease that is expressing tenascin-C comprising:

covalently linking a tenascin-C nucleic acid ligand with a therapeutic agent to form a complex, and administering said complex to a patient.